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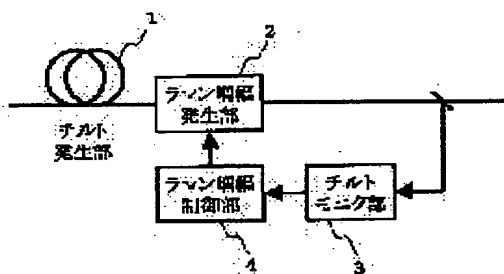
(54) WAVELENGTH CHARACTERISTIC CONTROL METHOD OF OPTICAL TRANSMISSION POWER BY RAMAN AMPLIFICATION, WAVELENGTH MULTIPLEX OPTICAL COMMUNICATION SYSTEM USING THE SAME, AND LIGHT AMPLIFIER

(57)Abstract:

PROBLEM TO BE SOLVED: To automatically compensate the wavelength characteristic of optical transmission power and to improve transmission characteristic, without damaging respective channel light beams by compensating the wavelength characteristic for a WDM(wavelength multiplex) signal light where the wavelength characteristic is generated in optical transmission power through the use of the gain wavelength characteristic of Raman amplification.

SOLUTION: A Raman amplification generation part 2 Raman-amplifies WDM signal light from a tilt generation part 1. Thus, a wavelength characteristic (tilt), generated in optical transmission power between channels, is compensated and optical transmission power between the channels is made uniform in the tilt generation part 1. A tilt monitor part 3 monitors the wavelength characteristic of optical transmission power, by using a part of WDM signal light outputted from the Raman amplification generation part 2. A

Raman amplification control part 4 adjusts the power of Raman excitation light in the Raman amplification generation part 2 according with the monitor result of the tilt monitor part 3. Thus, the gain wavelength characteristic of Raman amplification is controlled, so that the wavelength characteristic of optical transmission power is flattened.



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